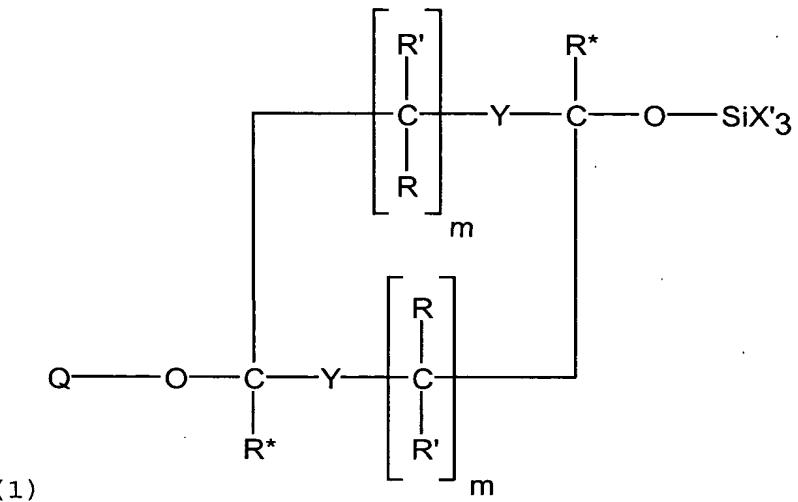


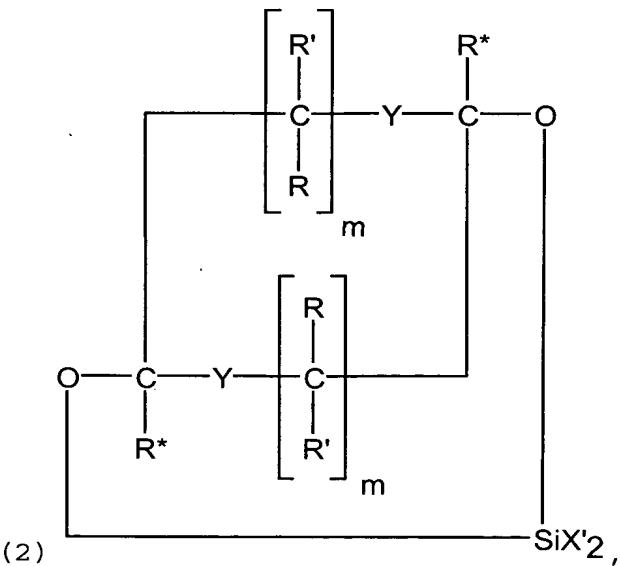
WHAT IS CLAIMED IS:

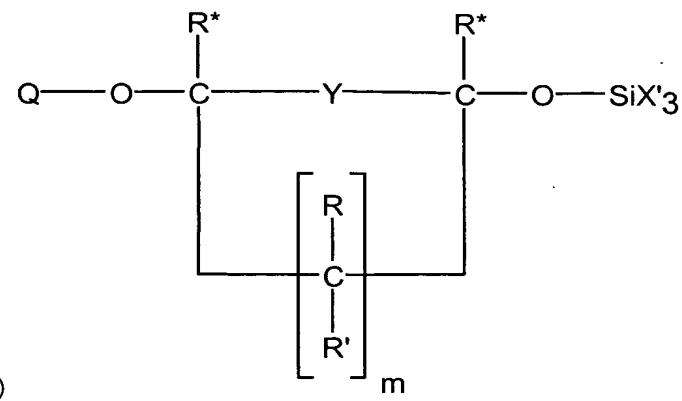
1. A monomer having a structural formula selected from the group consisting of:

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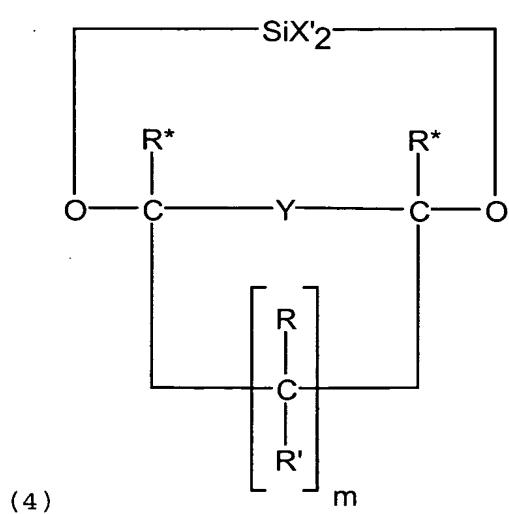


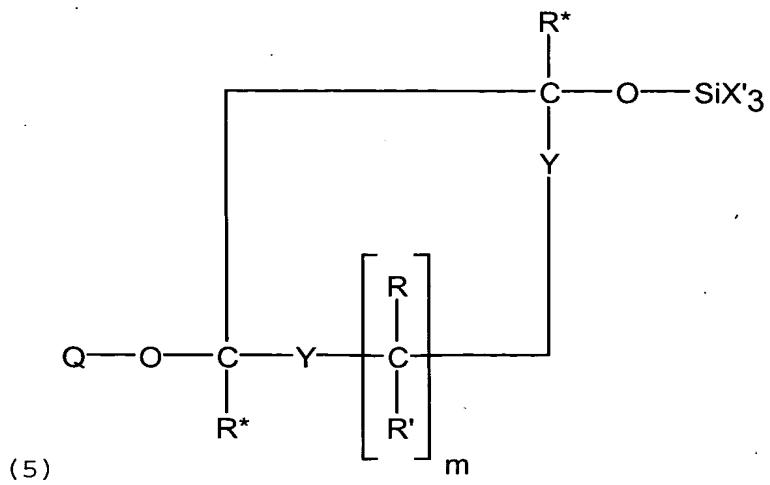
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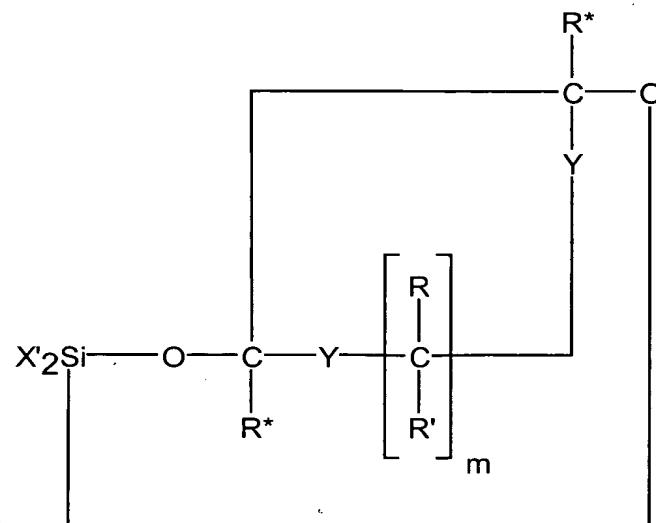


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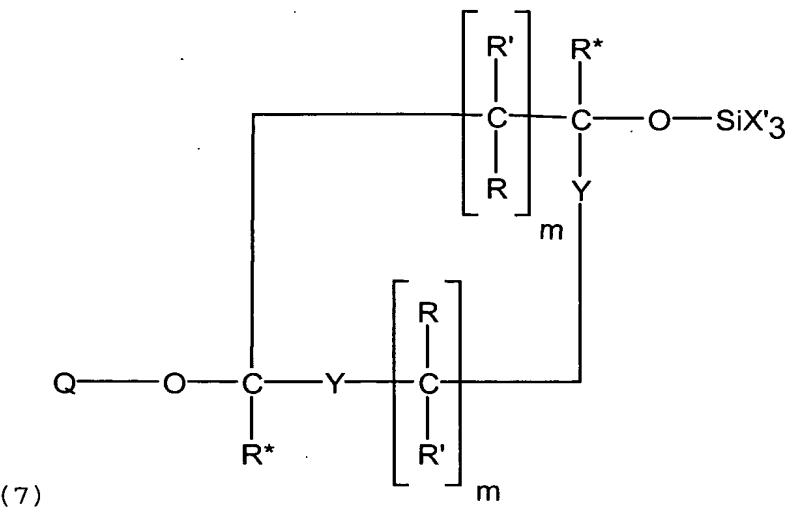


(5)

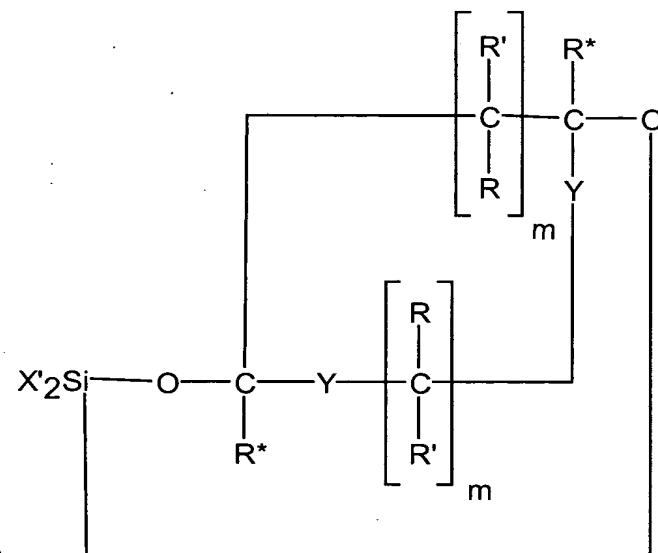


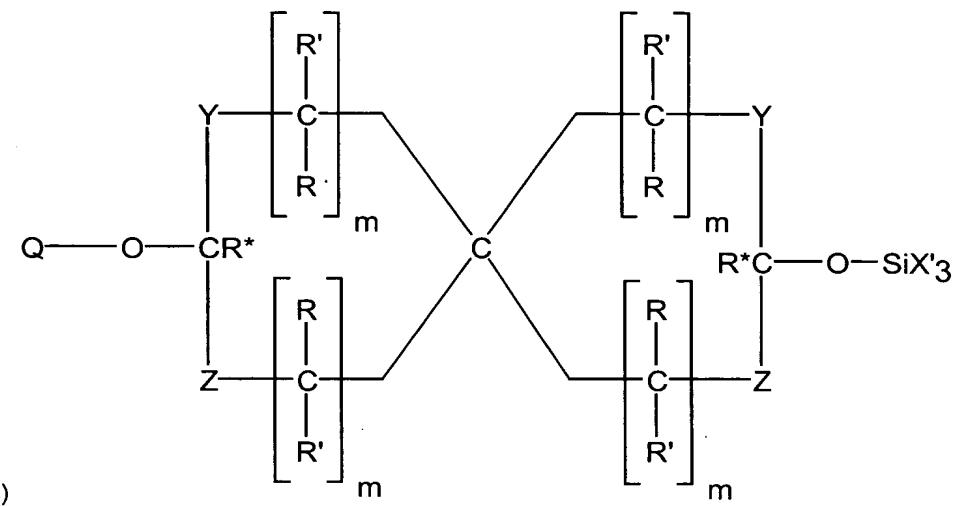
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(6)

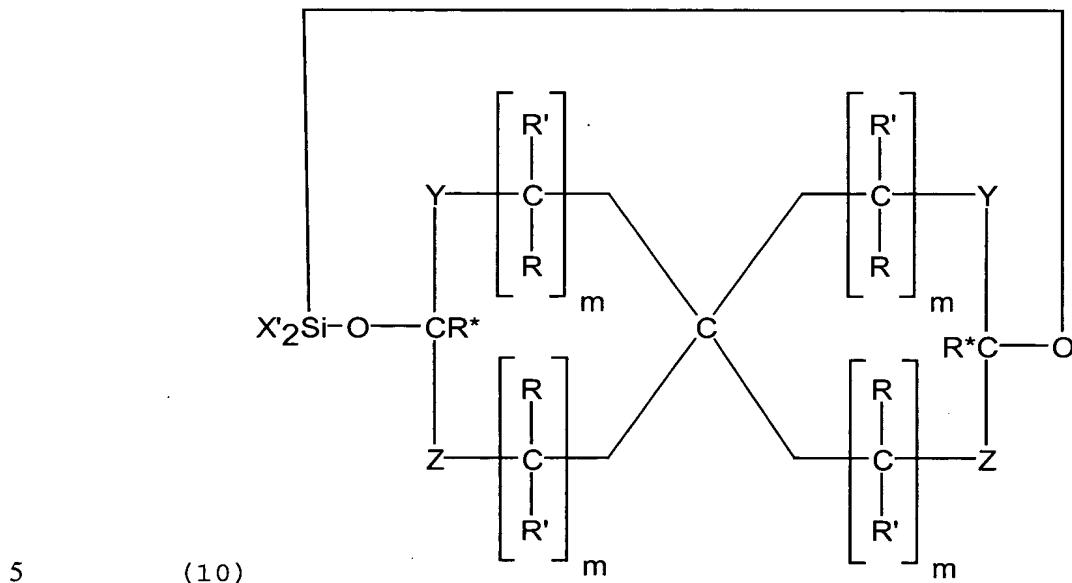


5





and



wherein m represents an integer from 1 to about 20; wherein X' groups can be the same or different; wherein X' represents an unsaturated moiety containing at least one non-aromatic double bond; wherein Q is selected from the group consisting of hydrogen atoms and $SiX'3$; wherein R and R' can be the same or different and are selected from the

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group consisting of hydrogen atoms, alkyl groups containing from 1 to about 12 carbon atoms, aryl groups containing from about 6 to about 18 carbon atoms, alkaryl groups containing from 7 to about 18 carbon atoms, alkoxy groups containing from 1 to about 18 carbon atoms, hydroxy groups, and halide atoms; wherein R* is selected from the group consisting of hydrogen atoms, alkyl groups containing from 1 to about 12 carbon atoms, aryl groups containing from about 6 to about 18 carbon atoms, and alkaryl groups

5 containing from 1 to about 18 carbon atoms, hydroxy groups, and halide atoms; wherein R, R', and R* can be bonded together in any combination in cases where R, R', and R* are not hydrogen atoms, halide atoms, or hydroxy groups; wherein Y represents a moiety selected from the group consisting of oxygen, sulfur, nitrogen, and phosphorus; wherein Z represents a moiety selected from the group consisting of C(R)R', oxygen, sulfur, nitrogen, and phosphorus; wherein the contiguous cyclic ring in formulas (1), (2), (3), (4), (5), (6), (7), (8), (9), and (10) can contain heteroatoms selected from the group consisting of oxygen, sulfur, nitrogen, phosphorus, and silicon in cases where m represents an integer greater than 1; wherein the contiguous cyclic ring in formulas (1), (2), (3), (4), (5), (6), (7), (8), (9), and (10) can be saturated or unsaturated in cases where m represents an integer greater

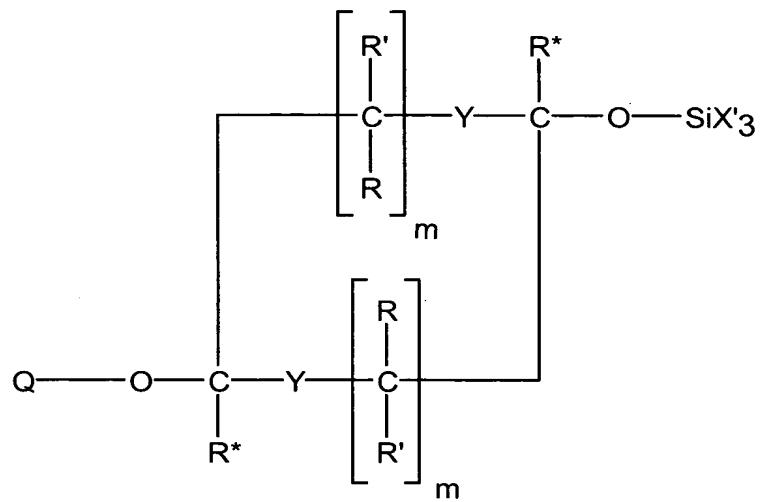
10 than 1; wherein said alkyl groups, aryl groups, alkaryl groups, and alkoxy groups can contain halide atoms and heteroatoms selected from the group consisting of oxygen, sulfur, nitrogen, phosphorus, and silicon.

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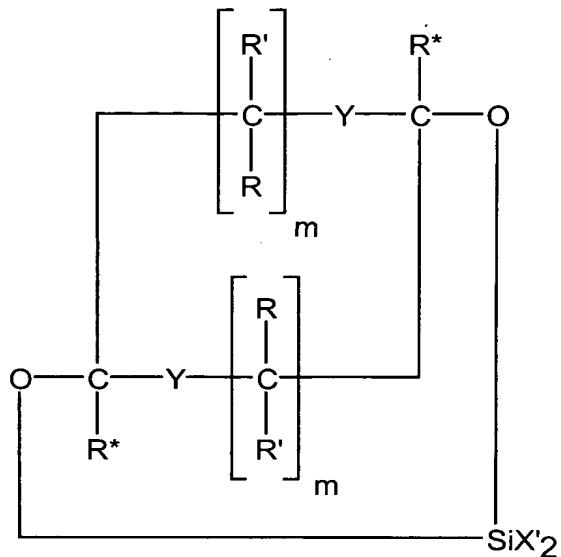
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30 2. A monomer as specified in claim 1 wherein the monomer is of the structural formula:



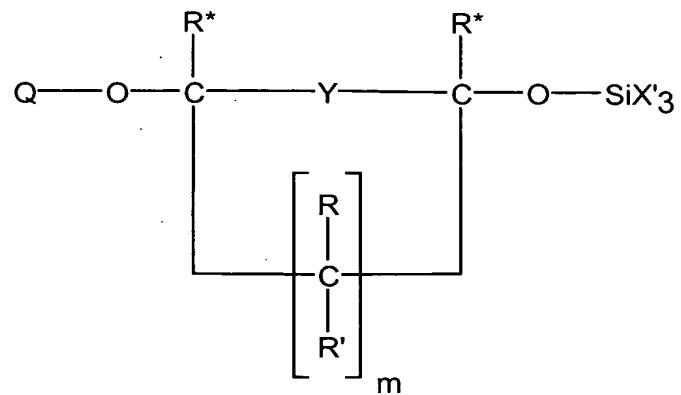
3. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

5



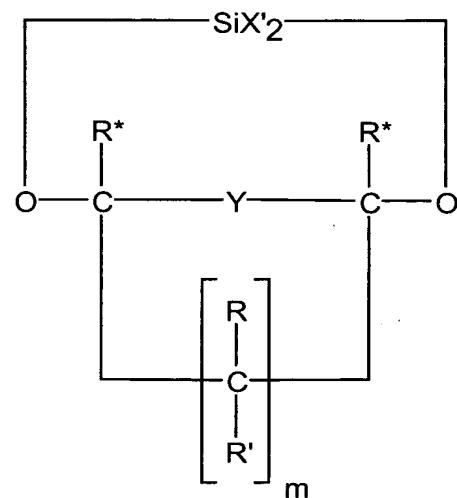
4. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

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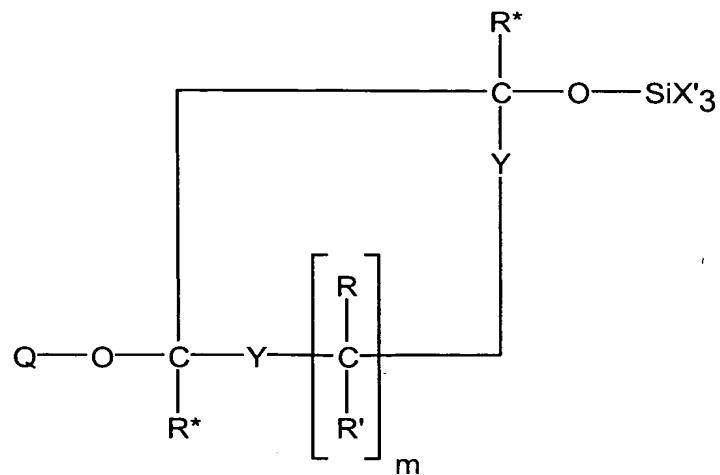
5. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

5



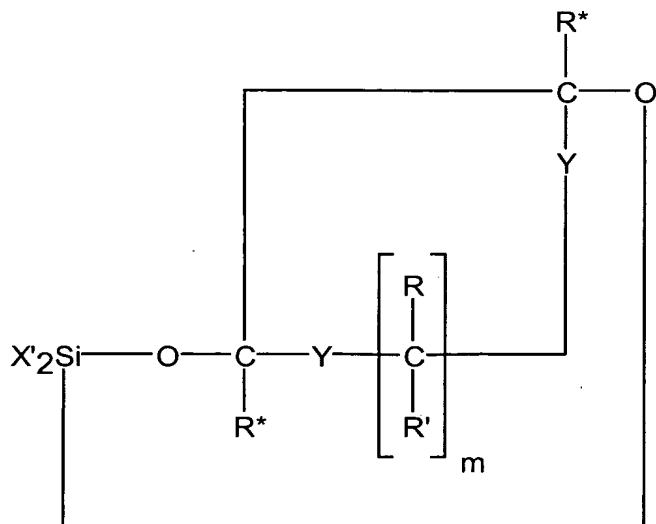
6. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

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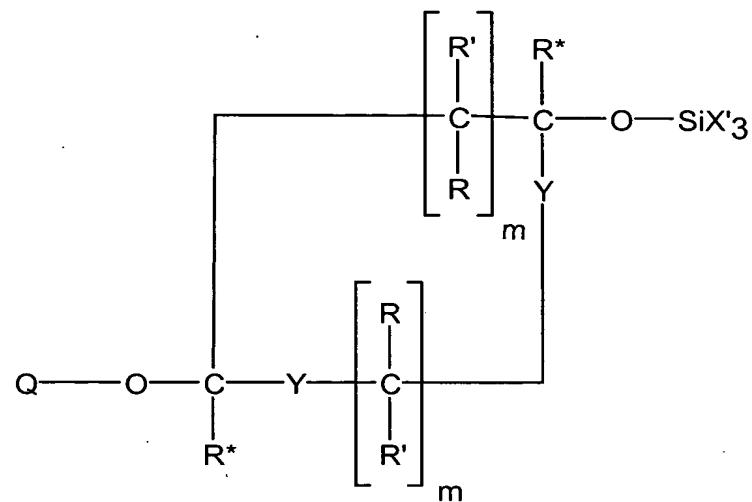
7. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

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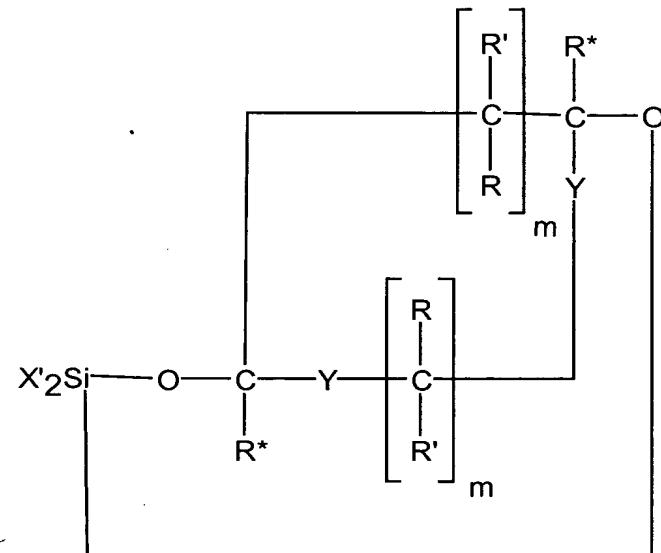
8. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

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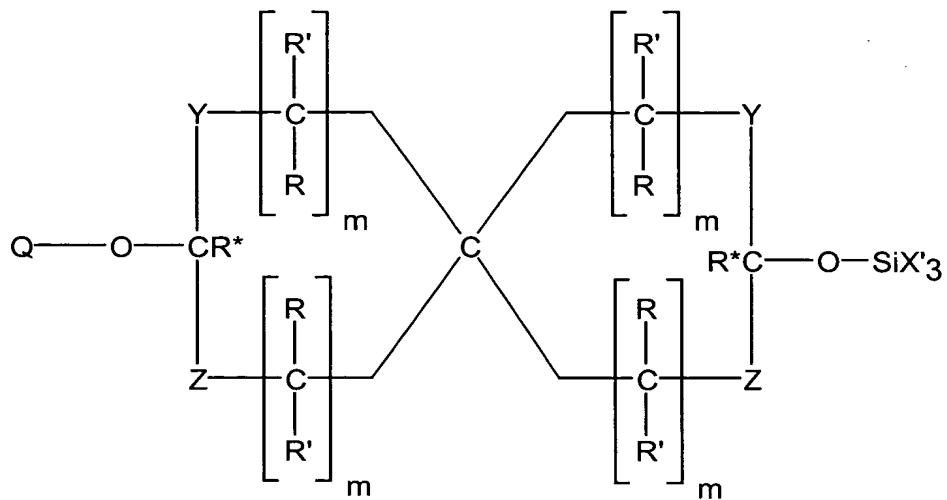
9. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

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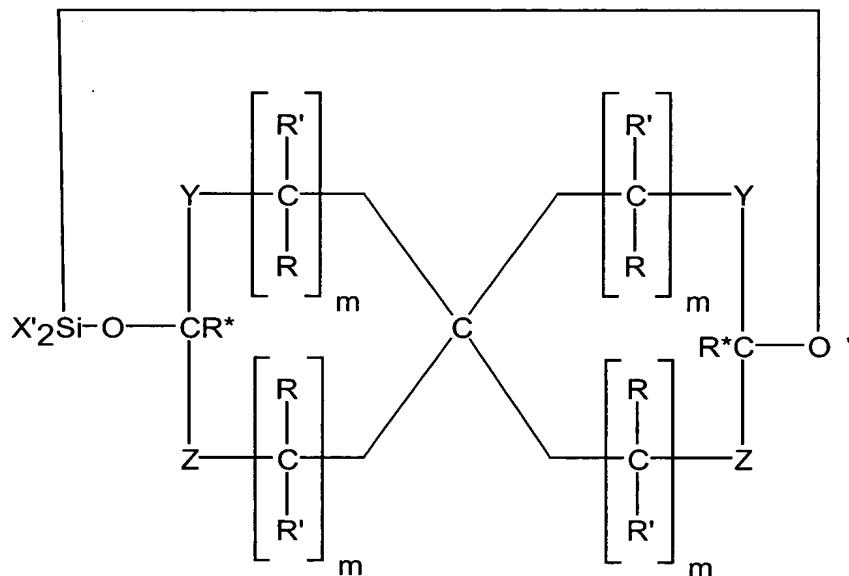
10. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

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11. A monomer as specified in claim 1 wherein the monomer is of the structural formula:

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12. A monomer as specified in claim 2 wherein Y is oxygen.

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13. A monomer as specified in claim 3 wherein Y is oxygen.

14. A monomer as specified in claim 4 wherein Y is oxygen.

5 15. A monomer as specified in claim 5 wherein Y is oxygen.

16. A monomer as specified in claim 6 wherein Y is oxygen.

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17. A monomer as specified in claim 7 wherein Y is oxygen.

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18. A monomer as specified in claim 8 wherein Y is

oxygen.

19. A monomer as specified in claim 9 wherein Y is oxygen.

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20. A monomer as specified in claim 10 wherein Y is oxygen and Z is C(R)R'.